

R E M A R K S

Attention is respectfully directed to the Second Declaration of Masanori Suzuki under 37 C.F.R. §1.132, hereto attached. In this Second Declaration, Mr. Suzuki, a joint applicant herein and a person of long experience in the field of electrophotography, particularly knowledgeable about two component developers, sets forth several pertinent points of technical information that were presented in applicants' last previous Amendment but dismissed by the Examiner, in the Office Action dated October 8, 2004 (hereinafter "the Office Action"), as "mere attorney argument." It is submitted that these points, as attested in Mr. Suzuki's Second Declaration, are entitled to weight in determining the patentability of applicants' claimed invention.

The entire specification has been reviewed, and amended, as necessary (without introducing any new matter), for compliance with the requirements concerning trademark usage discussed in numbered section 5 at pp. 6-7 of the Office Action. It is believed that these amendments fully overcome the objection to the disclosure therein set forth. No change has been made in the claims.

Claims 1 - 6, 8 - 22, 30, and 32 - 40 are in the application. Claims 8, 21, 30 and 39 have been allowed; all the other claims have been rejected.

New Matter

In numbered section 4 at pp. 3-6 of the Office Action, the Examiner repeats the new matter objection to the paragraph added to the specification at p. 56, between lines 5 and 6, in the Amendment filed September 26, 2003. That paragraph states:

"All values of saturation magnetization of toners set forth in the following Examples and Comparative Examples were determined at a magnetic field of 10 kOe, and are, therefore, values of saturation magnetization at a magnetic field of 10 kOe."

The Examiner asserts that "there is no evidence of record that there is any implicit disclosure of a magnetic field strength of 10 kOe."

Applicants respectfully submit that the requisite "implicit disclosure" is supplied by the full, precise and detailed description of the ingredients, steps and conditions of preparation for each of the Examples and Comparative Examples set forth in the disclosure of the original specification following the point of insertion of the quoted paragraph, as elucidated by the extrinsic evidence of the first and second Declarations of the joint applicant Suzuki under 37 C.F.R. §1.132.

In the first Declaration, Mr. Suzuki declared that

"All the values of saturation magnetization of toners set forth in the Examples and Comparative Examples of the above-identified application were determined by tests performed by me or under my direction. These values are listed in Table 1 on page 75 of the application.

"All these values of saturation magnetization in the Examples and Comparative Examples of the above-identified application were determined at a magnetic field of 10 kOe, and are, therefore, values of saturation magnetization at a magnetic field of 10 kOe."

This Declaration testimony establishes that the values of saturation magnetization given in the original specification for the Examples and Comparative Examples were in fact determined at a magnetic field of 10 kOe.

In his Second Declaration, attached hereto, Mr. Suzuki declares:

"The description of each one of the toners in the Examples and Comparative Examples of the specification of the above-identified application is sufficiently complete so that a person skilled in the art, following that description, would certainly produce a toner having essentially the same saturation magnetization at a magnetic field of 10 kOe as the value given for that toner in the specification."

The meaning of this statement is that the express disclosure of the specification, respecting the toners of the Examples and Comparative Examples, defines each of those specific toners with such particularity that every toner meeting that definition (i.e., produced by a person skilled in the art in strict accordance with the disclosure of ingredients, steps and conditions) would **certainly and necessarily** have the same saturation magnetization at a magnetic field of 10 kOe as the value of saturation magnetization given for that toner in the specification.

The value of saturation magnetization at a magnetic field of 10 kOe is a physical property of a toner. The Examiner observed earlier in the prosecution that the value of saturation magnetization of a given toner is dependent on the magnetic field at which it is measured; Mr. Suzuki's Second Declaration confirms this, declaring:

"The saturation magnetization of a toner changes depending on the magnetic field at which the saturation magnetization is measured. However, when the magnetic field is not less than 5 kOe, the saturation magnetization is almost the same at different fields, although the profile of the magnetization curve is different at different fields."

Thus, "a magnetic field of 10 kOe" is not simply a statement of a procedural condition missing from the specification disclosure (the

value of magnetic field at which the saturation magnetization of the Example and Comparative Example toners happened to be determined); rather, it is a part of a definition of a physical property of each specific toner described in the Examples and Comparative Examples.

As applicants remarked in a previous Amendment, an inherent property of a particular material is disclosed by necessary implication in any description of the material that is sufficiently complete so that every material meeting the description will have the property, even if the description does not expressly mention the property, because a material and its inherent properties are inseparable. Consequently, an amendment that merely adds to such a description (in a specification of a patent application) an express mention of a previously-unmentioned inherent property of the described material does not introduce new matter. *Ex parte Doushkess*, 47 U.S.P.Q. 525 (Pat. Off. Bd. App. 1940); see *Kennecott Corp. v. Kyocera International Inc.*, 5 U.S.P.Q.2d 1194, 1197-98 (Fed. Cir. 1987) (express description of inherent property is not new matter).

Citing M.P.E.P. §2163.07(a), the Examiner correctly asserts that

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference'"

and that

"Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient."

The extrinsic evidence represented by Mr. Suzuki's Second Declaration is exactly what is called for to establish inherency, under the foregoing test: that the disclosure of the toners of the Examples and Comparative Examples in the original specification is sufficiently complete so that the physical property (value of saturation magnetization at a magnetic field of 10 kOe) is necessarily and certainly present -- not just possibly or even probably present -- in each toner so described.

The Examiner further asserts, however, that the question is whether

"a person having ordinary skill in the art, upon reviewing the disclosure in the originally filed specification, [would] have concluded with a reasonable degree of certainty that the saturation values reported for the toners exemplified in the examples and comparative [examples], were determined at a magnetic field of '10 kOe.'"

This assertion appears to be based on a passage from *In re Robertson*, 49 U.S.P.Q.2d 1949, 1951 (Fed. Cir. 1999) quoted in M.P.E.P. §2163.07(a), viz.:

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill'" (emphasis added).

But the "recognized by persons of ordinary skill" test is not apposite to the present facts. In *Robertson*, which involved a mechanical invention, the issue of inherency was whether a claimed fastening means (for performing a specified function) was inherent in a reference disclosure of a fastening device where the use of that device to perform the claimed function was not taught. The present situation, in contrast, concerns an undisclosed physical

property of a composition of matter, as to which the rule is that, if the disclosure sufficiently defines the composition so that the property is necessarily inherent in it, an amendment expressly setting forth the property does not constitute new matter, regardless of whether the inherent property would have been obvious to one skilled in the art from the composition-defining disclosure *per se*. Cf. *Atlas Powder Co. v. IRECO Inc.*, 51 U.S.P.Q.2d 1943, 1946-47 (Fed. Cir. 1999): "Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. . . . Artisans of ordinary skill may not recognize the inherent characteristics" *Atlas Powder* (like *Robertson*) was directed to inherent anticipation rather than new matter, but as the citation of *Robertson* in M.P.E.P. makes clear, decisions on anticipation inherency may be pertinent to new matter issues as well.

For these reasons, applicants submit, the extrinsic evidence of the two Declarations under 37 C.F.R. §1.132, taken together, establish that the test of inherency properly here applicable is satisfied by the disclosure of the Example and Comparative Example toners in the original specification; hence the amendatory paragraph in question does not introduce new matter but merely sets forth expressly a physical property necessarily inherent in those toners as originally disclosed, "a field of 10 kOe" being part of the definition of that property. Reconsideration and withdrawal of the new matter objection are therefore respectfully requested.

Rejection under §112, First Paragraph

Claims 1 - 6, 9, 20 and 38 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement in respect of the limitation to a toner "having a

saturation magnetization of 10 emu/g to 25 emu/g at a magnetic field of 10 kOe."

This rejection is predicated, *inter alia*, on the assertion that the above-discussed amendatory paragraph previously inserted at p. 56 of the specification was objectionable as introducing new matter. As set forth above, applicants submit that (especially in light of the attached Second Declaration under §1.132) the paragraph in question did not introduce any new matter, but merely made explicit a necessarily inherent physical property (saturation magnetization at a magnetic field of 10 kOe) of the specific toners described in the Examples and Comparative Examples, and as such is now properly part of the written disclosure of the application. Reconsideration of the §112 rejection for this reason is requested.

In addition, the Examiner asserts that the evidence shown in the (first) Declaration -- and, by a parity of reasoning, the scope of express disclosure in the specification as amended by insertion of the paragraph added at p. 56 -- "is limited to only the particular toners exemplified in the examples and comparative examples of the specification" whereas "The instant claims are not . . . limited to the particular toner compositions exemplified in the examples." Applicants do not disagree with this characterization of the relative scope of the express (amended) disclosure and the rejected claims. However, the disclosure (now made express, but inherent in the original specification) of the values of saturation magnetization at a field of 10 kOe of the specific disclosed toners exemplifying the invention, and of the specific disclosed comparative toners, all of which are identical to the corresponding field-unspecified values of saturation magnetization of the same specific toners expressly set forth in the original specification, is submitted to make clear to the person of ordinary

skill in the art that the general ranges of saturation magnetization for the invention, described in the specification (not limited to the particular toners of the Example), are values at the same magnetic field as those of the examples illustrating the invention.

That is to say, by necessary implication, if an invention is exemplified in a specification by examples having a field-dependent variable property all determined at the same particular field, a field-unspecified range of values defining the invention, set forth in the same specification, is to be understood as expressing a range of values determined at that particular field. Hence, the inherent disclosure of saturation magnetization of toners of the Examples, now made express by the paragraph added at p. 56, in conjunction with the disclosure of field-unspecified saturation magnetization ranges, is submitted to satisfy the written description requirement of §112, first paragraph, for claims reciting those ranges and specifying the field at which the saturation magnetization is determined.

Rejection under §103(a)

Claims 1 - 6, 9, 10 - 20, 22, 32 - 38 and 40 have all been rejected under 35 U.S.C. §103(a) as unpatentable over Asanae et al. '699 in view of EP '507, with which Oka et al. is combined (for apparatus features) in the rejection of claims 10 - 20 and 22, and Asanae et al. '289 is combined (for particle size features) in the rejection of claims 9, 22 and 40.

All of applicants' rejected claims recite a two-component developer comprising a magnetic carrier, and a toner which comprises a binder resin and a magnetic material blackened by coating the surface of a magnetic powder with a coloring agent.

This combination is shown to afford significant advantages over a two-component developer, otherwise the same, that lacks the surface coating of the magnetic powder with a coloring agent (compare Examples 1 and 7 with Comparative Examples 1 and 4, respectively, in applicants' specification). The Examiner acknowledges that Asanae et al. '699 does not disclose use of a magnetic material coated with a coloring agent. It is the Examiner's position, however, that EP '507 discloses a one-component developer constituted of a magnetic toner having magnetic particles surface coated with carbon black while Asanae et al. '699 discloses a two-component (carrier + toner) developer wherein the toner is a magnetic toner, and that it would have been obvious to use the coated magnetic toner of EP '507 as the toner component of the two-component developer of Asanae et al. '699.

In their last previous Amendment, applicants urged that it would not have been obvious to employ a magnetic toner designed for use as a one-component developer (such as the toner of EP '507) as the toner of a two-component developer (such as that of Asanae et al. '699). They stated that when a one-component developer, which typically has a high saturation magnetization, is used as the toner in a two-component developer, the one-component developer receives a strong attraction force from a magnet contained in a developing sleeve as well as electrostatic force formed between a carrier and the developer, and thereby the one-component developer has poor developing ability, resulting in serious decrease of image density.

The Examiner dismissed this statement as "mere attorney argument." The same technical information is now set forth in the attached Second Declaration under §1.132 of the joint applicant Suzuki, and as such is submitted to be entitled to weight in determining patentability of the claimed invention, with specific

reference to the non-obviousness of combining EP '507 with Asanae et al. '699 as proposed by the Examiner.

Therefore, applicants again submit that, for the stated reasons, the use of the one-component developer toner of EP '507 as the toner component in the two-component developer of Asanae et al. '699 would not have been obvious to a person of ordinary skill in the art at the time the present invention was made; and that the recitals of a two-component developer comprising a magnetic carrier, and a toner which comprises a binder resin and a magnetic material blackened by coating the surface of a magnetic powder with a coloring agent, distinguish each of rejected independent claims 1, 10, 13 and 32 (as well as the claims respectively dependent thereon) patentably over Asanae et al. '699, EP '507, Oka et al. and Asanae et al. '289. The latter two references add nothing to Asanae et al. '699 and EP '507 with respect to the novel and distinguishing features of the recited two-component developer.

Further, applicants note that the toner concentration in the claims of Asanae et al. '699 is from 10 to 90% by weight, which is much higher than normal toner concentrations. Judging from this range, the eyes of Asanae et al. '699 are directed to a high toner concentration.

The reason therefor is as follows. Asanae et al. '699 uses a one component magnetic toner including a magnetic material at a high concentration (and therefore has high saturation magnetization) for a two component developer. Therefore, the toner receives not only a high electrostatic binding force from a carrier, which force is caused by friction between the toner and the carrier, but also a high magnetic binding force from a developing sleeve. When developing is performed by such a developer under a normal developing condition, a problem such that image density decreases

occurs. Therefore in order to avoid such a problem, the toner concentration is increased, thereby decreasing frictional charge quantity and electrostatic binding force. Thus, Asanae et al. '699 optimizes the developing conditions.

In this developing method, toner particles in such an amount that carrier particles cannot bear the toner particles are held on the surface of a developing sleeve by the magnetic force of the developing sleeve. Therefore, the toner particles cannot be uniformly mixed, and uniform magnetic brush developing cannot be performed, resulting in formation of images with poor clearness.

However, as can be understood from Table 1 below, the toner concentration and magnetic material content of the present invention partially overlap with those of Asanae et al. '699.

Table 1

	Present Invention	Asanae et al. '699
Toner concentration	Examples 4% by weight 13% by weight	Claims 10-90% by weight
Magnetic material content	10-40% by weight Examples 21.9 (SM*: 15.2 emu/g) 22.1 (SM*: 17.3 emu/g) 18.8 (SM*: 13.6 emu/g)	10-70% by weight preferably 20-60% Example 45%
Saturation magnetization	10-25 emu/g	no description

SM*: saturation magnetization

By controlling the saturation magnetization so as to fall in the above range, in the method of the invention, occurrence of the above-mentioned problem can be prevented.

Stated with reference to claims 1 - 6, 9, 20 and 38, which recite that the toner has a saturation magnetization of 10 emu/g to 25 emu/g at a magnetic field of 10 kOe, applicants submit that it would not have been obvious, from EP '507 and Asanae et al. '699 considered together, to select a toner having a saturation magnetization at a field of 10 kOe within this range, for combination with a magnetic carrier in a two-component developer.

The Examiner asserts that EP '507 "teaches that its black magnetic toner may have a saturation magnetization preferably in the range 20 to 80 emu/g at a magnetic field of 10 kOe," noting that "the lower end of the preferred saturation magnetization range disclosed by EP'507 overlaps the range recited in the instant claims." But EP '507 does not teach the selection of any particular part of this range for a toner to be combined with a magnetic carrier in a two-component developer, because EP '507 does not contemplate any such combination at all. Asanae et al. '699, as noted, is silent regarding the saturation magnetization property of the toner used in the two-component developer there described. Moreover, the single specific toner (example 20) of EP '507 identified by the Examiner as possessing characteristics meeting toner requirements of Asanae et al. '699, has a saturation magnetization of 29.6 emu/g at a magnetic field of 10 kOe, well above the upper limit of applicants' claimed range. Consequently, even assuming *arguendo* (which applicants do not concede) that it would have been considered obvious to use the toner of example 20 of EP '507 as the toner of the Asanae et al. '699 developer, that combination would not meet the saturation magnetization limitation of applicants' claims 1 - 6, 9, 20 and 38, and there is nothing in either reference to suggest or motivate any such modification of their hypothetically combined teachings.

It follows that the saturation magnetization limitation of claims 1 - 6, 9, 20 and 38, in combination with the other features there defined, presents an additional feature of patentable distinction over Asanae et al. '699, EP '507, and any proper combination thereof. Once more, the additional references (Oka et al. and Asanae et al. '289) fail to supply what is missing from Asanae et al. '699 and EP '507 in this respect.

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For the foregoing reasons, it is believed that this application is now in condition for allowance. Favorable action thereon is accordingly courteously requested.

Respectfully,

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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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